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FURTHER ANALYSIS ON NON-AGRICULTURAL VALUE CHAINS

LEBANON INDUSTRY VALUE CHAIN DEVELOPMENT (LIVCD) PROJECT

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FURTHER ANALYSIS ON NON-AGRICULTURAL VALUE CHAINS

EXECUTIVE SUMMARY

The objective of this report is to provide the LIVCD Team and USAID with further analysis on the potential for non-agriculture value chains to be included in the LIVCD portfolio of value chains. In early December 2012, the LIVCD Team conducted a selection process to determine the viability of a number of value chains, both agriculture and non-agriculture value chains to be included in the assessment phase of the project. The concept regarding the selection process was that those that fit certain criteria as outlined in the LIVCD contract would be selected for further analysis and potentially included in the group of value chains that LIVCD would work on during the implementation phase of the project. Now that LIVCD is on the verge of beginning the implementation phase, the project team, through this report, is considering one final time a group of non-agriculture value chains to ensure that their elimination from future work is warranted.

The value chains included in this report are: 1) furniture; 2) ICT; 3) alternative energy; 4) electrical generation; 5) pharmaceuticals; and 6) paper and packaging. These value chains were considered for selection on the basis of three sets of criteria: 1) competitiveness; 2) development impact; and 3) feasibility.

The report concludes that none of the value chains listed in the preceding paragraph fit the criteria for inclusion in the LIVCD portfolio. The report details why they do not fit the criteria, and in each case there is a "deal-breaker" reason as follows:

FURNITURE: Improving the competitiveness of the furniture value chain will actually reduce the number of jobs in the sector. This is because currently the sector is dominated by small scale factories and galleries that have very low labor productivity. Improving labor productivity would require consolidation of the sector which would entail loss of jobs. Further, the furniture value chain relies almost exclusively on imported raw material, and it is predominantly located in urban settings, thereby not qualifying for LIVCD assistance.

PHARMACEUTICALS: The critical impediments within this sector are the limited number of actors and households involved, and the need for numerous institutional reforms, including setting up a governance committee, regulating trade, as well as limiting the power and influence of importers and traders. Furthermore, the upgrading of this value chain would require a substantial amount of investment in R&D. Meaningful improvements in this value chain would require the approval of the United States Food and Drug Administration (FDA) which would take years to produce an uncertain result. The time line for improving this value chain is thus not within the timeframe of the LIVCD project.

PRINTING AND PACKAGING VALUE CHAIN: The deal-breaker to include printing and packaging as a LIVCD value chain is that there are very few firms that work in the packaging portion of this value chain, and the printing portion is primarily urban. Thus there are only a few firms who would benefit from LIVCD engagement. However, it is important to note that packaging is a cross cutting value chain for LIVCD. All assessments for agriculture value chains include work in packaging. This value chain will thereby benefit, albeit indirectly from LIVCD work

ICT: According to a 2009 ESCWA report, the domestic software market is expected to grow relatively slowly, due to the continuing problems with piracy which are not likely to be solved in the near future. This value chain is not likely to generate significant numbers of jobs in the rural economy because of the highly skilled labor required for this sector. Furthermore, the geographic distribution of such companies is limited to the Greater Beirut Area and urban centers in Mount Lebanon. Many rural areas lack the quality of IT connectivity needed for development of this value chain. Lack of foreseeable job growth and its urban focus disqualifies ICT to be included in the LIVCD implementation phase.

ALTERNATIVE ENERGY: Alternative energy is an emerging – still at its exploration stage – value chain, therefore most of the assessment indicators – competitiveness, development impact, and feasibility - are not relevant (e.g. production is less than a million dollars). The analysis contained in the report concludes that the timelessness of impact and the financial resources required for this value chain are out of the scope of the LIVCD project.

ELECTRICAL GENERATION: This value chain has the potential to grow in the coming years because of anticipated reconstruction of post-conflict Syria. Yet, the prospects for broad based returns to development of this value chain are compromised by the fact that only a few firms dominate the industry at present and there are high costs to enter this value chain. Most component parts to electrical generators are imported, and the main activity for Lebanese companies is assembly. LIVCD investments in this value chain are not promising, in spite of future regional prospects. The companies currently working in electrical generation do not require LIVCD assistance to compete well in the region.

1. FURNITURE:

LIVCD explored the possibility of enhancing furniture production in rural areas to improve local economic development, increase income, and create new jobs. As a viable value chain for LIVCD, however, the critical impediments within this sector are its high dependence on imported raw material, and its low labor productivity. Changing this scenario needs important technological improvement and restructuring smaller enterprises into larger firms, which in turn would lead to medium term job losses and would negatively impact vulnerable urban households. Adding the fact that furniture production is mainly an urban industry, working in this value chain is not a promising value chain for LIVCD. Specifically, it is out of the scope of LIVCD, in terms of job creation and development of the rural economy.

COMPETITIVENESS

Producers (a few large companies and small scale crafters) are concentrated in small industrial clusters in Tripoli, Saida and greater Beirut (Furniture manufacturing still constitutes a part of the cultural heritage of Tripoli and Saida, and is an employment-generating source for people who moved from rural areas to

settle in Beirut's suburbs. Since the livelihoods of poor urban households depend on it, the sector is protected by a relatively high tariff rate on imported furniture, at the cost of maintaining inflated consumer prices. The vast majority of handcrafters as well as known "galleries" activities include retail trade of imported furniture and production of on-demand custom built items. This has allowed for greater margins and permitted the survival of small-scale businesses, as well as the export of production.

The demand for exports of Lebanese furniture mainly comes from the Arab Gulf Countries, as it is admired for its quality and range of styles, and benefits from a regional competitive advantage. The potential for differentiation is high although it appears to be already fully exploited. It appears differentiation and retail of imported production are elements of the diversification strategy used by furniture producers.

The need for diversification of furniture business activities arises from its dependence on the import of raw materials, its traditional mode of production, and its low labor productivity.

DEVELOPMENT IMPACT

The development impact of short and medium term interventions in the sector are likely to be low; any plans to develop and restructure the sector would involve restructuring into larger firms, and the introduction of process technological upgrading that is most often laborsaving. It should, therefore, be imbedded within a national scale industrial strategy.

The potential to generate more jobs is low; moreover intervention and restructuring of the sector would drive a large part of semi-skilled and unskilled labor out of employment. The potential to increase income to businesses is estimated to be medium and focus on technological upgrading - as discussed above - would generate unemployment.

The scope for women involvement is low while involvement of youth is high although child labor constitutes a relatively significant part of the labor force. The geographic coverage of the industry is limited and mainly concentrated in urban areas.

FEASIBILITY

The private sector engageability is low. Most furniture "galleries" are family businesses that have developed a quality reputation, established export markets, and diversified activities to include retail of imported furniture. The high margins received on retail of imported furniture and exports of differentiated products are counter incentives for investment in technological changes and R&D and for sharing market linkages with smaller producers.

Medium size and small manufacturers would be more inclined to change. Yet, any alterations would require vocational training and investment in technology. Apart from the technological unemployment it would create, such an intervention is not feasible on the short and medium term.

Note that the Syrian conflict has a negative impact on the export of the sector, especially to the GCC.

2. PHARMACEUTICALS:

LIVCD explored the possibility of enhancing the Lebanese pharmaceutical value chain, especially to take advantage of export opportunities and displace the considerable amount of imports. As a viable value chain for LIVCD, however, the critical impediments within this sector are the limited number of actors

and households involved, and the need for numerous institutional reforms, including setting up a governance committee, regulating trade, controlling fraud, and implementation of the law, as well as limiting the power and influence of importers and traders. Furthermore, the upgrading of this value chain would require a substantial amount of investment in R&D. The timeline for improving this value chain is thus not within the timeframe of the LIVCD project. There is also doubt about the ability of this value chain to generate broad based employment or income in the poorest regions of the country. This value chain does not show promise for LIVCD.

Competitiveness

The health services sector is a very prominent sector in Lebanon. The country is considered as a medical center for the Middle East thanks to its competitive medical services providers and their scientific state-of-the-art-technologies and proficiency. Nevertheless, little effort has been made to complement this sector with pharmaceutical and other paramedical research and manufacturing; instead investments have been made in related trade sectors. Actually, there are only eight local manufacturers of drugs producing brand names (manufactured under a license) and generics drugs, while there are more than 100 registered traders. An upgrading of the value chain would have to be based on gaining access to the U.S. market - displacing Jordan as the main supplier of medicines in the Middle East – and it would require Lebanese companies obtaining FDA engagement and approval, a process that can take years with no guarantee of success.

Contrary to traders in pharmaceuticals who are often actors in national health scandals, manufacturers benefits from high credibility abroad, which allows them to export a large part of their production. In fact, the main obstacle facing the development of the manufacturing sector is the power of these traders, not only in regards to their political influence and lobbying but also in terms of their long standing relationship with physicians and pharmacists who play a major role in directing patients towards purchasing imported or locally produced medicines.

The potential to capture added value and differentiation are low. Differentiation – and therefore capturing value added – in this R&D based sector is linked to the ability to innovate and issue patents. Such efforts need public and private spending on long term research as well as education and formation of highly skilled professionals. Thus, Lebanese pharmaceutical companies need to adopt cost reduction strategies and price competition in order to be competitive in the short and medium term.

DEVELOPMENT IMPACT

The number of households engaged in the sector is very low. A significant share of the sector's work force is educated young people, therefore the **potential to engage women and youth indicators are not applicable**, i.e. out of context, since it is unlikely to engage marginalized rural youth and women. Furthermore, the paucity of companies engaged in the sector implies a **very limited geographical distribution and impact**.

Nevertheless, assuming a large scale intervention is undertaken, **the long term potential to increase income of businesses and households is high.**

FEASIBILITY

The engageability of the private sector is low, especially if a holistic value chain approach is adopted. As previously discussed distribution and trade of drugs is controlled by importers that have long standing influential relationships with physicians, practitioners, and pharmacists. Furthermore, **the feasibility of**

interventions is related to investment in long term R&D and cost reduction, which requires long term plans.

Note that **the Syrian conflict has a negative impact** on the sector, since truck shipments to the Gulf are hampered.

3. PRINTING AND PACKAGING INDUSTRY

LIVCD considered the possibility of enhancing the printing and packaging industry in Lebanon. The analysis concludes that investments in the packaging and printing value chain could result in modest to high returns, including additional exports. The printing sector falls out of the scope of the LIVCD project, as most of the printing establishments are located in urban centers. In regards to packaging, the assessment showed some potential for the project to intervene. Nevertheless, the LIVCD team is envisaging its intervention as embedded within all of the other value chains, since packaging and branding of products is a major business that impacts the appeal and sales of almost every item that is distributed through retail locations. It definitely impacts more rural workers than the paper industry. Furthermore, it is integrated into almost all agricultural and agro-industrial operations. Packaging is an element that must be taken into consideration in regards to post-harvest handling of goods, food safety, and marketing. It adds value to, and extends the shelf life of, agricultural and agro-industrial products. It, therefore, must be taken into consideration as a key factor in most of the value chains that LIVCD will work in.

COMPETITIVENESS

A well-known Arab expression says that: “Books are written in Cairo, printed in Beirut and read in Baghdad”. The Lebanese printing industry started its development in the early 1920’s, benefiting from the freedom of speech environment prevailing in the country compared to the rest of the region. As shown in the graph below, it is an export industry and one of the few industries in which Lebanon’s balance of trade is positive. the impact of this sector on rural areas is limited.

The potential to capture added value and to differentiate is high, however this potential is highly linked to the “packed-products”. The package itself has the functional role of adding value and differentiating the products, the overall result being beneficial to both the producers and the packaging manufacturer.

DEVELOPMENT IMPACT

Seventy percent of packaging is made of recycled paper from local waste. Creating linkages between these factories and producers of differentiated and high quality products would **potentially increase the income of packaging businesses, and the potential for generating new jobs is high – including stimulating employment among women and youth in the poorest regions of the country.**

In addition to the strong linkages between packaging and producers, Furthermore as households do not directly own packaging companies, **it is estimated that return to households from profit increases of packaging businesses would be low**, especially if the intervention focuses on employment generation.

FEASIBILITY

There is high potential for involving private sector businesses in the project, success in many of the selected agricultural value chains depend on the link with packaging companies. The engageability of the

latter is often a must for success. Enhancing the packaging sector is an integrated action in the work plan of agricultural value chains and **positive impacts are expected to happen within the time line of the project.**

Note that **the Syrian crisis has a negative impact** on the packaging sector because of additional difficulties it has created for exporters.

4. ICT

LIVCD could consider supporting ICT application development and consulting services. Indeed, ICT is a growing sector of Lebanon, yet, it may not easily meet the criteria for broad based returns to investments. Nor is it easily defined as a rural value chain. The LIVCD Team concludes that the returns to investment in this value chain will be modest or low.

COMPETITIVENESS

There are around 559 ICT companies in Lebanon, 70 percent of them working in the assembly, maintenance, and retail of hardware, while 19.6 percent are specialized in software development, and 5.6 percent in telecommunications ¹. There are a limited number of companies that specialize in ICT equipment or tool development. **The sector contribution to GDP is estimated at \$400 million per year.**

Unfortunately no data are available on the value of export sales of Lebanese ICT companies nor estimation of “import” costs of software and other ICT technology transfer. According to a 2009 ESCWA report, the domestic software market is expected to grow relatively slowly, due to the continuing problems with piracy. Nonetheless, there is a large number of Lebanese software companies operating from Europe and the U.S., who have moved back to Lebanon, and have boosted the Lebanese software development sector in recent years. The domestic software industry is mainly export focused, with one third of local software firms’ activities. Local software companies tend to have a focus on banking, retail, education, and trade.

DEVELOPMENT IMPACT

The sector employs around 7,000 to 8,000 specialists, which is significantly lower than market needs, and **the number of households engaged scores a medium in LIVCD’s rankings.** Lebanon has many IT professionals, however, a significant number work abroad in order to take advantage of higher wages based on the demand for well-educated and skilled professionals. The potential to increase wages of people working in the sector and therefore increase income of households is low because wages are already relatively high- though only for highly educated and skilled employees.

After the July 2006 conflict, a number of initiatives focused on ICT as an engine for development. For example, USAID, among others, has funded an initiative known as Access to Markets through IT (AIM IT). In addition, there is currently at least one IT incubator that is providing financing, office space, and technical consulting for start-ups based on a venture capital model of sharing in the equity of the supported companies. However because of the highly skilled labor required for this sector employment

¹ The Canadian Trade Commissioner Service, April 2010 report

generation is limited in scope and remains low. Furthermore, the geographic distribution of such companies is limited to the Greater Beirut Area and urban centers in Mount Lebanon.

Similarly to pharmaceuticals, a significant share of the sector's work force is educated young people, therefore **the potential to engage women and youth indicators are not applicable**, i.e. out of context, as they were designed to assess the possibility to engage marginalized rural youth and women.

FEASIBILITY

Intervention in the ITC value chain is supported by the high likelihood of finding significant formal **private sector enterprises** willing to work with the project and the relatively low timeliness of potential impact. Note that the Syrian conflict has a neutral impact on the ICT value chain.

5. ALTERNATIVE ENERGY

Alternative energy is an emerging – still at its exploration stage – value chain, therefore most of the assessment indicators – competitiveness, development impact, and feasibility - are not relevant (e.g. production is less than a million dollars). However, the following section discusses potential opportunities and concludes that the timelessness of impact and the financial resources required for this value chain are out of the scope of the LIVCD project.

The infrastructure, production, political, and institutional problems facing the energy sector in Lebanon constitute one of the major challenges of the Lebanese economy. The chaotic governance of the sector results in high costs and a supply lower than the demand for energy. The cost of energy – together with real estate prices – is often cited as the main problem faced by the industrial sector.

Within this context, the Ministry of Energy has supported a pilot alternative energy initiative, which is aimed at promoting the installation of solar water heaters. The initiative was successful in terms of both energy saving and creation of new economic activities. Passive solar water heaters are now well established in the market, with multiple firms supplying them at competitive rates. However, it had a very limited impact on the overall energy supply in Lebanon.

In a 2010 policy document the Ministry of Energy committed to "launching, supporting, and reinforcing all public, private, and individual initiatives to adopt the utilization of renewable energies to reach 12 percent of electric and thermal supply." The target was set very high and no time limit was mentioned. In order to apply this policy the Ministry intends to: (1) complete a wind atlas for Lebanon and launch IPP wind farms with the private sector, (2) start a pre-feasibility study on Photovoltaic (PV) farms, (3) encourage the public and the private sectors to adopt incineration technologies to produce electricity from waste, (4) encourage all individual and private initiatives to produce hydro power, even micro-hydro. The Ministry will also seek to set tariffs for energy produced from renewable resources and synchronize it with the existing electric network.

One can deduce from the Ministry's policy paper that the development of the sector is at the initial stages of a long and unclear path. Lebanon policy makers are just starting to look at the feasibility of such projects. Moreover, most alternative energy technologies, such as solar panels and wind, are prohibitively capital intensive, and would require large upfront investments that are beyond the scope of LIVCD. Less capital-intensive alternative energy, such as bio-energy or micro-hydro is more appropriately incorporated into specific value chain upgrading activities when an appropriate investment opportunity is identified. It also would not be a value chain that would result in broad based gains in employment and incomes for rural Lebanese citizens.

Note on electrical generators

This value chain has the potential to grow in the coming years because of anticipated reconstruction of post-conflict Syria. Yet, the prospects for broad based returns to development of this value chain are compromised by the fact that only a few firms dominate the industry at present and there are high costs to enter this value chain.

Most component parts to electrical generators are imported, and the main activity for Lebanese companies is assembly. LIVCD investments in this value chain are not promising, in spite of future regional prospects. The companies currently working in electrical generation do not require LIVCD assistance to compete well in the region.